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WIDE-ANGLE, WIDE-APERTURE OBJECTIVE, THE "KINO-RUSSAR 7"

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WIDE-ANGLE, WIDE-APERTURE OBJECTIVE, THE "KINO-RUSSAR 7"

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The known wide-angle photographic objectives with a focal length of 22.5 mm, an angle of the field of vision of 108°, and a relative aperture of 1:3.5 cannot be used in moving-picture cameras with a film with broad frames. Besides such objectives are complicated in the making.

In the proposed objective as an outside component there is used a telescopic system with an angular magnification of 0.5 consisting of two meniscuses with spherical surfaces and as an internal component there is used a five-lens objective of the Gauss type. This enables one to obtain the minimum possible dimensions of the lenses for a given field of vision and simplify the technology of their making.

On the drawing there is given a schematic image of the objective described.

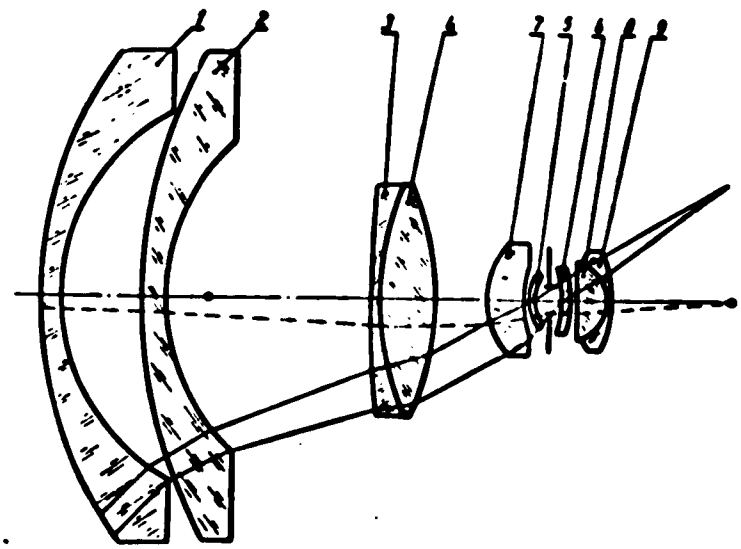
The objective consists of external and internal components. As the external component there is used a telescopic system of angular magnification of 0.5 and focal length of 22.5 mm containing negative meniscuses 1 and 2 with spherical surfaces and positive achromatized lenses 3 and 4

and serving to develop the field of vision and increase the focal length needed for placing the mirror obturator.

As the internal component there is used a five-lens objective of the Gauss type made up of the internal negative meniscuses 5 and 6 and two exterior positive meniscuses 7 and 8 working at a distant position of the iris assuring the direction of the astigmatism and transverse spherical aberration in inclined beams. A positive meniscus 9, which serves to correct the spherical and chromatic aberrations is cemented together out of glass parts of the brands TK-14 and TF-1.

Subject of the Invention

A wide-angle, wide-aperture objective, the "Kino Russar 7" with a focal length of 22.5 mm, a relative aperture of 1:3.5, and an angle of the field of the field of vision of 108°, which is distinguished by the fact that for the purpose of obtaining the minimum possible dimensions of the lenses for a given field of vision and simplicity in the making there is used in it as the exterior component a telescopic system with angular magnification of 0.5 consisting of two negative meniscuses with spherical surfaces, and as the internal component there is used a five-lens objective of the Gauss type.



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